



Flight Desk

April 2010

The official newsletter of Chesham Model Flying Club Ltd

Volume 22

Issue 2

April Club Night

White Hill Centre

Wednesday April 21st

20:00

Alan Cardash

The Boomerang Jet and Beyond.

Editors Ramblings

Not a tremendous amount to report from me this time. I have been severely limited on the flying front (as have the majority of the club flyers) and work has prevented me getting along to club night and committee meetings. I will, however be attending our next speaker night with Alan Cardash. As some of you know, I am a small electric flyer (well 6'6" small) but I do admire the crop of jets that are being flown in the club. Alan designed the Boomerang, which seems to be the de facto jet trainer and we see them at Newground. It should be a fascinating insight.

On the personal front, I am in the final throws of completing another scratch built twin EDF. This is a slightly larger model which promises to be a hot ship with docile slow speed performance. Give me some good weather soon and it could be an interesting maiden!!

As always, you can contact me (Colin Hooper) at:

webmaster@cheshammodelflyingclub.co.uk

Secretary's Notepad

The next "official" job will be to file the Club's Annual Return at Companies House - all Limited Companies have to do this. These days it's all done online.

On the modelling front, I have now test flown the DB Spitfire (81 inch span) and, at the time of writing I have logged over a dozen flights. All up weight is just on 20 lbs which includes 3 lbs nose weight. Apart from one take off incident (pilot error) things have gone very well. It's a biggish model which demands respect at the start and finish of every flight. I built in at least five degrees of washout (more than twice what the kit said) to avoid the dreaded tip stall and the C of G is well forward of the recommended position. You can always take lead off but you shouldn't take off without enough!!

Paul Baker tells me that he has acquired a quarter scale Mustang - can't wait to see that. Hopefully Al will also be giving his ex David Turner Lysander an airing, hope to be there for that too!!

Don't forget the BALLOON BURSTING COMP on 11 APRIL !!! I'm hoping for two things - a good turn out and decent weather.

Cheers, RG
Safe and happy flying!!

The events for the next few months are:

April 11th	Competition @ Newground (Balloon Bursting)
April 21st	Club Night @ White Hill Centre
April 25th	AHA @ Newground (No club flying)
May 3rd	BBQ @ Newground
June 13th	Competition @ Newground
June 16th	Silent Night @ Pednor
July 25th	Competition @ Newground
August 15th	Competition @ Newground
August 18th	Silent Night @ Pednor
August 30th	BBQ @ Newground
September 5th	Competition @ Newground
September 12th	AHA @ Newground (No club flying)
October 20th	Club Night @ White Hill Centre
December 15th	Club AGM @ White Hill Centre

Chairman's Report

All quiet on the Chairman's front.
Humpy

Treasurer's Report

All quiet on the money front.
Bob

Member's Ramblings

DIY BEARING FIX

If you have a ball raced i/c engine with many miles on the clock, or maybe one that's been less than carefully stored, you will probably have worn/corroded bearings. Glow engines run on methanol and, usually, nitromethane plus a lubricant. Methanol is hygroscopic i.e. it attracts water and the products of combustion are hostile to ball bearings. Plain bearing engines (e.g. the OS "LA" series) do not suffer, however you will still see evidence of corrosion around the rear face of the crankshaft if the engine has had a hard life. It is possible to ruin your internals through neglect - chucking the engine in a damp shed will do no good. Petrol engines (like your lawnmower) should be immune if looked after. Also, glow engines that have been run on castor "straight" (no nitro) fare much better although you will invariably find the usual castor gum/varnish problems.

If your engine has, when cold, perceptible play when the prop is rocked fore and aft you may well have heard a rumble or roughness when running. Some engines will carry on in this state for ages but there are limits!

The procedure for replacing the crankshaft bearings is the same irrespective of engine size and is not difficult with a few simple tools, patience and a source of heat.

New bearings are obtainable through model shops, online or from bearing suppliers - most engines use standard sizes and dimensions are widely published (try www.modelfixings.com).

You will need a decent set of allen drivers/cross point screwdrivers, some pieces of timber, an old towel or thick gloves, a prop nut spanner and sheets of newspaper plus kitchen roll. For a heat source an electric gun - paint stripping type - is best or you can use the domestic oven. I don't recommend a gas torch. Meths is useful for cleaning. If your motor has a prop driver located by a collet (e.g. Irvine Mk 3 series made in UK) you will need a puller - a small three leg is best, or OS make a special tool which fits most common engines.

STEP ONE

Thoroughly clean the engine and remove glow plug, carb., cylinder head, back plate and prop driver. Note which way round the parts fit. Unless

your motor has a separate front housing you will now have to remove the cylinder liner. Fit an old small wooden prop or a similar piece of wood. Place the crankcase on a block of wood and heat until too hot to touch and/or you can smell the old oil burning. Some liners will fall out but normally you will have to persuade the liner to move upwards. The only safe way to do this is to insert a matchstick in the exhaust port and rotate the crankshaft. The liner will pop up and carefully pull/prise it out using a gloved hand or wooden levers. Do not use any force or screwdrivers or you may cause irreparable damage. Most engines have a tiny mark on the liner "top hat" - a small vee - and/or a locating pin in the top of the crankcase. Mark the back of the con rod - a small scratch will do. For engines with a front housing you can remove the four screws and the whole thing with the crankshaft and both bearings comes away in one piece. Again, note the position for reassembly. With care, the piston/liner can stay in place.

STEP TWO

Pull the con rod free of the crankpin and take out the piston assembly vertically through the crankcase. In some cases there will not be enough end float on the piston/small end due to carbon/combustion deposits; try cleaning with meths and an old toothbrush plus more heat and all should be well. You may want to decoke the piston crown (and the cylinder head) - use small wooden scrapers and the meths again. If the piston is ringed check that it's free in its groove. If it's stuck (and therefore not working correctly in contact with the liner) it is possible, with great care, immersion in meths then heating, to unstuck it but rings are fragile and easily broken. They are also expensive!. Note that there will be a small peg in the ring groove and the ring has stepped ends which close over the peg. Leave well alone unless you are sure. The ring is best removed by using thin feeler gauges slid under the ends like peeling an apple. As before, note which way round everything is located. (My Moki 180 had a well stuck ring which took nearly an hour to remove and in this case I carefully cleaned out the groove and eased the ring by rubbing on superfine wet/dry then cleaning VERY thoroughly in meths).

STEP THREE

Bearing removal. You now have either a bare crankcase plus two bearings and a crankshaft, or a front housing ditto. With sufficient heat - you may need to repeat this- both bearings should fall out when the cases are rapped on to a wooden block. The front bearing exits out front. In most cases the front bearing will have a reinforced rubber/plastic seal clearly visible. Sometimes the crankshaft and rear bearing will come out as one

unit. Pull the old bearing off – some will fall off! Thoroughly clean the crankshaft and inside of the crankcase.

STEP FOUR

Bearing replacement. Ideally, the new bearings should be a good sliding fit on their respective ends of the crankshaft. However, some may be too tight to push on and here it is permissible to CAREFULLY ease the crankshaft with genuine SCOTCHBRITE – do not use any other form of abrasive. In the rare event of a really sloppy fit you will have to try another make of bearing – Loctite is not a good idea inside model engines. It will help if you put the new bearings in the freezer, in a poly bag, for fifteen minutes or so. Heat the crankcase or housing. Have on hand pieces of dowel – wooden spoons are the best. Lightly oil the crankshaft and slip on the rear bearing, insert into the case and slip on the front bearing, making sure that it enters true and square. You will need to keep pushing against the rear of the crankshaft whilst doing this and it is advisable to replace the collet/prop driver/old prop to pull the whole lot together. You may need more heat. Check that the shaft is properly seated at both ends. Lubricate the bearings and squirt oil down the hollow passage in the crankshaft. For “unit construction” motors oil the crankpin and replace the piston/rod assembly as previously marked. For separate front housings, follow the same bearing replacement procedure but you will have to locate the con rod on the crankpin as you offer up the housing – new gasket if necessary. Some engines don't use gaskets! Replace back plate/gasket.

STEP FIVE

Liner replacement. Ensure the liner is clean; it will also help if this is given the “freezer” treatment. Smear the inside of the liner with oil. There will be a tapered “lead in” on the bottom; heat the crankcase. Slide the liner into the crankcase at the same time ensuring that the piston enters the bottom squarely. Seat the liner on the case exactly where marked or pegged. Ensure that the liner is fully home; refit the head whilst the case is still hot. If your piston is ringed you will need to close the ring over the peg in the ring groove as you feed in the bottom of the liner and this needs care – try not to twist the liner as it's easy to trap or break the ring. Cocktail or lolly sticks are useful. (It may help if you have a “dummy run” on the piston/liner separately).

When cool, lubricate the bore and squirt oil down the carb. hole, check motor turns over smoothly, shake out excess oil and replace plug.

When you first run the engine you should, ideally, recheck all bolts after the first five minutes or so.

Eventually, all bearings wear but you can take steps to minimise corrosion – the rear bearing is the major problem. Never leave fuel in the tank/engine and always run the engine out of fuel when hot. Store nose up wherever possible, or at least at a decent angle so that exhaust residue does not run back into the crankcase. This will also attack certain liner plating.

Any queries, don't hesitate to contact me. The above procedures are not Holy Writ but have worked for me. Four stroke engines are slightly more complicated – there are lots more bits and you have to retain the valve timing!!

You can, of course, send your engine away for all these jobs!!

Cheers, RG

By Flt Lt. Trevor Brunt.

Time for 'A' Test

Well hello chaps, I know it's been a long time, but the weathers been crap, and it's been too cold to do anything. Also it's so long since we've see each other I've forgotten most of your name's!



Anyway, I think the weather is starting to turn and I've even been flying. There's going to be a few new models beating up the sky this year and my new YT International 120 size Spit will be one of them, "although I'm a little nervous," still in for a penny, in for a lot of pounds.

Not being a very competent model builder, I once again received the willing help of my good friend Flt Sergeant Jeff Denty, who seems to be able to tackle anything, and these "YT kit's aren't your normal 95% ARTF'S". Not only that but while helping me he's also built a new model himself, but I won't spoil the surprise. I've put in a request for his promotion to Warrant Officer first class (engineering), but don't tell him.

For Christmas I received a model of the AT6 American Harvard, electric version, but Jeff said I have to have a go at building it on my own, he can be hard sometime's.

Finally I've taken the hint from Sqd Leader Al Spicer and decided that after only 5 years of solo flying that I should bite the bullet and take my 'A' Test, all I need is some decent weather, and for him to stay in the country long enough to test me, or I may have to call on the services of Wing Commander Richard Ginger. Oh, and if I pass there's a drink waiting for you, all you'll need is your wallet!! and mines a pint.

That's all for this issue but will try and do better next time, hopefully I may get to meet some new recruits to write rude things about.

See you on the flight line.

Biggles

Events Report

“EVENTS”

We had our first club night of 2010 in February which as you know had a slightly different twist. Instead of having a speaker we had several members bring along their winter projects to display.



There were a variety of models on display from helicopter to rocket with scale planes and jet model in-between. With plenty of tea, coffee and biscuits available as well as the usual bar facilities all was set for an enjoyable evening!

Here are a few pictures of some of the models that members brought along!



I must say though that the overall turnout and support for those members who had taken the trouble to bring along their models was poor and disappointing for a club with as many

members as we have. For those that did come along a very interesting evening was had with plenty of good feedback and several requests to do it again!



For those members who took the time and trouble to bring along their models I would like to say a big thank you. Despite the relatively low turnout it was indeed a most interesting and informative evening. Thanks also go to Phil Camp who kindly took the trouble to take photographs and forward them to me to select a few for this article!

“FORTHCOMING EVENTS”

Next on the calendar is the Balloon Bursting (“fun day”) Competition on Sunday 11th April 2010 which kicks off at around 11.00am so you can get a brief flight or two in first. There have been some discreet questions asked this year by some potential “first time” competitors, so perhaps we’ll see some new faces this year? The word competition is far too strong, it’s a FUN DAY!!!! There’s no excuse for not taking part, if you can fly then you can take part. All you have to do is over-fly the patch, straight and level at around 10ft and just wait for the helium filled balloons, (on cotton tethers), to “pop with your prop”! Even if you are not taking part then do come and watch, there’s always some entertainment to be had as well as the new bbq to try out! I can say categorically that Al’ Spicer will not be winning this year, as he won’t be there!

On Wednesday 21st April we have our second club night of 2010 at the usual venue, the white hill centre, starting at 8.00pm. Our guest speaker will be Alan Cardash, the designer of the incredibly successful Boomerang Jet Aircraft. Alan will be bringing along some models as well as video footage of flights and who knows, maybe something on his latest project that had its first test flight only a few weeks ago. This really does look like being a great, informal evening with a remarkable aero modeller! DON’T BE LATE!!!!

The AHA will be using our Newground site on Sunday 25th April 2010 and as such there will be no club flying whilst their trials are taking place. Club members are permitted to spectate if they wish!

With spring well and truly upon us, (yeah, well, so they say), it’ll soon be time for our May Day bank holiday bbq at Newground. So if you want a nice relaxing picnic with the family or try out the new bbq come along to Newground and chill out. We will of course be hiring in the usual toilet facility for the bank holiday weekend. There will be the usual club flying as well as a club trainer on hand if any family members would like to “give it a go”!!!! Hmmm, maybe I can

convince Richard Ginger to organise a bit of balloon bursting in the afternoon for some light entertainment!

Ray Birdseye, CMFC events coordinator events@cheshammodelflyingclub.co.uk
Tel 07703 768354

Instructor's "European" Corner



With Al Spicer

Hi everyone

I thought I would do a slightly different write up this time, with a bit of a European twist (and a bit of help from me 'ole mate Ray) all the way from

Valencia.

Some of you may or may not know, Ray Birdseye and myself took a trip back in January to Valencia to see our fellow club member Carlos 'club chef' Nunes who is now the Technical Director of the new Addax GP 3 team, and visit his local model flying club.

Before we go any further we would both like to express our gratitude to Carlos for his hospitality for the entire weekend. He was an excellent tour guide chauffer and host, from collection at the airport to site seeing trips, as well as showing us the best restaurants in the area, (and we don't mean McDonald's!)



Back to the flying club and the ever present subject of safety. The club in general was excellent with good facilities, a clubhouse complete with bar and open fire for the winter, although obviously not as cold as our winters. Outside they have a large permanent Bar-b-que and ample car parking facilities along with a large shelter, not for the rain like us but to keep the scorching sun off pilots and models.



Going back to the bar Ray did find the service a bit slow (joke!!)
(Apparently he was there for an hour, dehydrating slowly!)

The runway was of concrete design for both fixed wing and helicopter, both having a safety fence between models and spectators. The quality of models, of which were mainly very large wingspan with petrol engines were very nicely presented indeed (and expensive!) and the pilots flying abilities were also very impressive, nice smooth aerobatic flying with spot on manoeuvres



Big Pitts special with a 100cc petrol engine.
Futaba radio gear and all digital servo's.

This member is using 2.4ghz radio which seems to be popular in Spain too.

Pits area, fixed wing runway is on the right of the picture, the safety fence can also be seen on the right.

The helicopter pad can be seen on the far left of the picture, again complete with safety fence.

Note very nice shelter over pits area.



All in all a very impressive club.... lovely models..... great flying....UNTIL.....to our horror this happened.....



CAN YOU SEE ANYTHING WRONG IN THIS PICTURE??

If you have just answered NO.... then you need to swat up on your safety procedure protocol in the the pits, plane park/start up area.

The club member in the photo started this 170cc petrol engine, swinging a 32inch carbon prop.....whilst facing spectators and other club members, if that wasn't enough he then proceeded to rev it to full throttle to check the settings. AAAAGGGHHHH!! We stood there cringing!!!



I know I keep on about this dastardly deed (and it's bad enough with the average size models we fly....but can you imagine this little carbon baby being thrown off into the pits area at goodness knows what revs.....Does not even bare thinking about !!!!!!!

On a slightly lighter note, how about this for a purpose built trailer/workshop for your models? Complete with pillar drill, grindstone and it's own generator as well as numerous tools and spares.



After having no luck at the bar, Ray decides to find a cornet... Unfortunately it turned out to be a member's trailer and not an ice-cream van!!

As we said near the beginning we had a fantastic weekend. Apart from the flying of which we visited three times we also had a jolly to the GP3 headquarters a couple of times (of which Ray was hyperventilating when he thought he was booked for a go in the race car simulator only to find out there was a problem with it) You should have seen his face drop.....The 'Carlos' tour was very interesting too as the Addax GP2 team shares the same factory

GP2 Race Car being set up at the factory



We also went to the Valencia Race Circuit which is only a stones throw from the flying club, and visited two model shops in Valencia centre, very well stocked...prices about the same as here really, and all the same type of gear in stock.



The numerous café bars and restaurants we visited were most splendid

Cheers Carlos you did us proud mate and we can't wait for the next trip.....(if you can put up with us again..!!!)

Well that just about wraps it up for this issue, lets hope the weather picks up in the next few weeks as I'm gagging to do a bit of flying...I also have two planes to test fly for a couple of members.....Watch this space.....

All the best 'SAFE FLYING' AL